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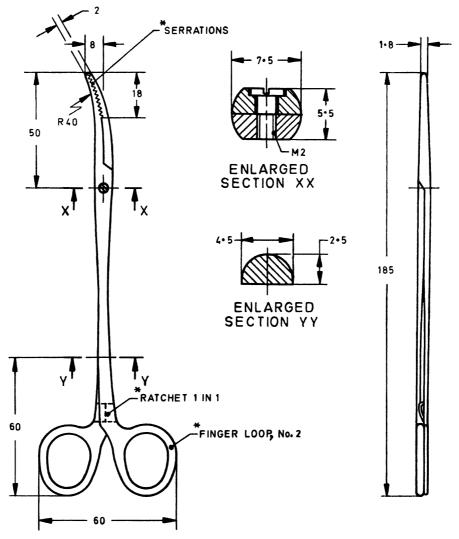


Indian Standard

SPECIFICATION FOR FORCEPS, TONSIL ARTERY, CURVED, SCOTT'S PATTERN

(Incorporating Amendment Nos. 1 & 2)

- **1. Scope** Covers dimensional and other requirements for tonsil artery curved forceps, Scott's pattern, used in ENT surgery.
- 2. Shape and Dimensions As shown in Fig. 1.



 $*See ext{ IS}: 3642 ext{ (Part 1)-1990 'Surgical instruments — Specification: Part 1 Non-cutting, articulated instruments (<math>second revision$)'.

All dimensions in millimetres.

FIG. 1 FORCEPS, TONSIL ARTERY, CURVED, SCOTT'S PATTERN

- **2.1** The pitch and depth of serrations at the tip of the forceps shall be 0.8 and 0.4 mm respectively.
- **2.2** A deviation of ± 2.5 percent shall be allowed on all dimensions.
- 2.3 Joint Requirements as given in 13.2.1 of Section 3 of IS: 3642 (Part 1)-1990 shall apply.
- **2.4** Finger Loops Shall be of Size No. 2 and requirements conforming to Section 6 of IS: 3642 (Part 1)-1990.

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- **2.5** Serrations Requirements as given in Section 2 of IS: 3642 (Part 1)-1990 shall apply.
- **2.6** Ratchet Teeth Shall conform to Section 4 of IS: 3642 (Part 1)-1990.
- **3. Material** The forceps shall be made of stainless steel conforming to Designation 30Cr13 of IS: 6603-1972 'Specification for stainless steel flats and bars'.

4. Workmanship and Finish

- **4.1** The surfaces of the forceps shall be free from scales, burrs, pits and other surface defects.
- **4.2** The forceps shall be symmetrical and well balanced.
- **4.3** The edges of the forceps shall be smoothly rounded off and shall no where be sharp.
- **4.4** The arms of the forceps shall move easily and freely at the joint but there will be no undue play at the joint.
- **4.5** The forceps shall be polished bright and passivated.
- **4.6** The teeth for holding shall not protrude beyond a plane longitudinal to the jaws of the forceps in the locked position.
- **4.7** The jaws shall register correctly.
- **4.8** The engagement of the serrations shall start from the tip and proceed backwards.
- **4.9** The tips shall meet before the ratchet engages.
- **5. Heat Treatment** The forceps shall be uniformly hardened and tempered to give a hardness of 380 to 440 HV.

6. Tests

6.1 Load Closure — The ratchet teeth of the forceps shall engage when a load of 70 N (7 kgf approximately) is applied on the finger loop.

6.2 Flexibility

- **6.2.1** A strain of moderate degree shall be applied by the thumbs and fingers to each shank of the forceps, at right angles to the long axis and in the plain of the finger loop. This shall be repeated at several points along the shank. The test shall then be repeated in a plane at right angles to the first. On completion of the test, the shank shall not acquire a new permanent set.
- **6.2.2** The terminal 12 mm of the jaws shall be made to bite on a piece of vulcanized rubber sheet 5 mm thick and the forceps closed and opened 10 times. During or on completion of the test the forceps shall show no sign of damage.
- **6.2.3** One arm of the forceps shall be fixed in a suitable vice at a point near the joint so that 118 mm of the arm (as measured from the upper surface of the vice jaws to the upper pole of the finger loop) protrudes above the vice. By the application of a gradual force at a point on the upper pole of the finger loop, the shank of the forceps shall be deflected in a plane at right angles to that of the finger loop by 7 mm as measured at the upper extremity of the clamped arm. On release of the force no permanent set shall be observed. The test shall be repeated on the same arm with the finger loop fixed at its equator in the vice, and the shank projecting above the vice. The deflecting force shall be applied to the shank at a point 118 mm from the upper surface of the vice and shall act in a plane at right angles to that of the finger loop. The shank shall be deflected by 7 mm as measured at the level of the point where the force is applied. On release of the force no permanent set shall be observed. This test shall be repeated on the other arm.
- **6.3** Corrosion Resistance The forceps shall satisfy the requirements of boiling and autoclaving test as specified in **5** and **6** of IS: 7531-1990 'Methods for testing of corrosion resistance of stainless steel surgical instruments (*first revision*)'.
- **7. Marking** Each forceps shall be marked with the manufacturer's name, initials or recognized trade-mark.
- 7.1 ISI Certification Marking Details available with the Indian Standards Institution.
- **8. Packing** Each forceps shall be wrapped in moisture-proof paper and packed in polyethylene bags. They shall be suitably protected by wrapping in cotton wool. The forceps may also be packed as agreed to between the purchaser and the supplier.

EXPLANATORY NOTE

This edition 1.2 incorporates Amendment No. 1 (October 1984) and Amendment No. 2 (February 1994). Side bar indicates modification of the text as the result of incorporation of the amendments.